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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/784,594

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Harold C. Ockerse

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EXAMINER

BEAULIEU, YONEL

ART UNIT

PAPER NUMBER

3661

DATE MAILED: 02/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/784,594

Applicant(s)

OCKERSE ET AL.

Examiner

Yonel Beaulieu

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-106 is/are pending in the application.
- 4a) Of the above claim(s) 18-49 and 54-106 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-11 and 50-53 is/are allowed.
- 6) ☒ Claim(s) 1 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 2,3 and 15-17 is/are objected to.
- 8) ☒ Claim(s) 1-106 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/11/05&6/7/04.
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1 – 17 and 50 - 53, drawn to an electronic compass system/assembly, classified in class 701, subclass 224.
- II. Claims 18 - 19, drawn to a rearview mirror, classified in class 701, subclass 49.
- III. Claims 20 - 28, drawn to a compass subassembly, classified in class 702, subclass 92.
- IV. Claims 29 - 39, drawn to compass system with display, classified in class 434, subclass 1.
- V. Claims 40 – 43 and 83, drawn to compass system with time zone (navigation), classified in class 701, subclass 200.
- VI. Claims 44 – 49 and 80 - 82, drawn to electronic compass with computed historical heading, classified in class 701, subclass 216.

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VII. Claims 54 - 79, drawn to improvement to vehicle having a conductive glass windshield, classified in class 701, subclass 36.

IX. Claims 75 - 79, drawn to a method of mounting magnetic sensing elements to a circuit board, classified in class 307, subclass 415.

X. Claims 84 - 106, drawn to electronic compass for a convertible vehicle, classified in class 701, subclass 1.

The inventions are distinct, each from the other because of the following reasons:

All claimed inventions, as broken down above, are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for either Groups is divergent, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Terry S. Callaghan (Reg. No. 34,559) on 12/22/05 a provisional election was made with traverse to prosecute the invention of Group I, claims 1 – 17 and 50 - 53. Affirmation of this election must be made by applicant in replying to this Office action. Claims 18 – 49 and 54 – 106 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 12 – 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Clymer et al. (US 5,525,901).

Regarding claims 1 and 12 - 14, Clymer et al. teaches an electronic compass for a vehicle (col. 2: 37 – 42 at least), comprising a magnetic sensor circuit for sensing three perpendicular components of the Earth's magnetic field vector and for generating output signals representing the three sensed components (col. 1: 9 – 14 at least) – the magnetic sensor circuit sensing elements being positioned in non-perpendicular orientation (col. 6: 65 – col. 7, line 6; col. 8, line 66 – col. 9, line 12 at least); a pitch and roll circuit for sensing (monitoring) pitch and roll of the sensor (note abstract at least); and a processing circuit coupled to the magnetic sensor circuit and the pitch and roll circuit for receiving the output signals (by way of output lines 21a, 21b, 23a, and 23b), compensating the sensed components and computing a heading of the vehicle as a function of at least two of the components and generating a heading signal representing the computed heading (col. 3: 34 – 36; col. 4: 30 – 35; col. 8: 46 – 51; col. 9: 49 – 51; and col. 14: 10 – 17 at least).

### ***Allowable Subject Matter***

Claims 2, 3, 15 - 17 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 4 – 11 and 50 – 53 are allowed.

The art of record fail to teach an electronic compass system for a vehicle comprising, among other limitations, a processor circuit coupled to a magnetic sensor circuit for computing a heading of the vehicle if there is not too much noise present in the output signals generated by the magnetic sensor as a function of some sensed components and generating a heading signal if too much noise is present in the output signals; the processor further performing a coordinate transform to account for the positioning of at least one of a plurality of field sensing elements such that the axis of sensitivity is oriented in one of two non-perpendicular orientations.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yonel Beaulieu whose telephone number is (571) 272-6955. The examiner can normally be reached on M-W 9-3; F 9-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas BLACK can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Yonel Beaulieu  
Primary Examiner  
Art Unit 3661